



## CHARLOTTE

May 26, 2011

Mr. Tom Reeder  
N.C. Division of Water Resources  
1611 Mail Service Center  
Raleigh, North Carolina 27699-1611

Subject: IBT Report for 2009

Dear Tom:

We are sending our calendar year 2009 IBT Annual Report. We are also transmitting this report to you electronically. The report follows the format of earlier reports and includes a narrative section with background and program progress reports along with spreadsheets detailing the IBT amount calculation.

For calendar year 2009, we experienced an actual maximum day IBT of 16.00 mgd based on August billing data and as of December 31, 2009, had additional outstanding IBT commitments of 1.63 mgd. The summation of these amounts would indicate a 2009 IBT amount of 17.63 mgd which is less than 54% of our authorized amount.

Please let me know if you have any questions.

Sincerely,

CHARLOTTE-MECKLENBURG UTILITIES

A handwritten signature in black ink, appearing to read "Barry Gullet".

Barry M. Gullet, PE  
Director

Cc: Toya F. Ogallo



*Charlotte-Mecklenburg Utilities  
Annual Report on Interbasin Transfer  
Calendar Year 2009*

The North Carolina Environmental Management Commission (EMC) approved Charlotte Mecklenburg Utilities' (Utilities') petition to increase the amount of water transferred from the Catawba basin to the Rocky River basin and an interbasin transfer (IBT) Certificate was issued on March 14, 2002. The Certificate authorizes Utilities to transfer up to 33 million gallons per day (mgd) from the Catawba River basin to the Rocky River basin.

The IBT Certificate requires Utilities to report maximum daily IBT amounts annually to the North Carolina Division of Water Resources (NC DWR) until such time as the transfer amount exceeds 80% of the authorized amount. Once that amount is exceeded, Utilities is required to report monthly. To date, Charlotte-Mecklenburg Utilities has not exceeded 80% of the authorized IBT amount.

**System Overview**

The Utilities operates the water and wastewater systems that serve Charlotte, Cornelius, Davidson, Huntersville, Mint Hill, Matthews, Pineville, and much of the unincorporated areas of Mecklenburg County. This system is divided between two river basins designated by NC General Statutes for regulation of IBT water. The western portion of the system is within the Catawba River basin and the eastern portion is within the Rocky River basin. Water transferred from the Catawba River basin to the Rocky River basin that is not returned to the Catawba is regulated IBT.

Water for distribution to Utilities' customers is withdrawn from the Catawba River basin at two locations. An intake at Lake Norman sends water to the Lee S. Dukes Water Treatment Plant. A second intake at Mountain Island Lake sends water to the Walter M. Franklin Water Treatment Plant and to the Vest Water Treatment Plant. Potable water from these three plants is delivered through an interconnected distribution system to retail customers throughout Utilities' service area in Mecklenburg County and in small areas of Iredell, Cabarrus, and Union Counties. The Utilities also provides wholesale water to municipal systems for Resale including: City of Concord (NC), Town of Harrisburg (NC), Union County (NC), York County Water & Sewer Authority (SC), and Lancaster County Water and Sewer District (SC).

Utilities treats wastewater at five advanced wastewater treatment plants (WWTP's) which discharge into small streams in Mecklenburg County. Four of the streams are tributary to the Catawba River basin and one (Mallard Creek) is tributary to the Rocky River basin. Utilities also conveys wastewater generated in portions of Mecklenburg County to the Rocky River Regional Wastewater Treatment Plant (RRRWWTP) operated by the Water and Sewer Authority of Cabarrus County (WSACC). The RRRWWTP discharges treated effluent to the Rocky River.



### **IBT Monitoring**

Water supplied to Utilities' retail customers in the Rocky River Basin, that is not returned to the Catawba basin, is included in the reported IBT amounts. Water provided to municipalities with service areas in the Rocky River basin include the City of Concord and the Town of Harrisburg.

Utilities can transfer treated potable water to the City of Concord through three metered connections to their water system. All of Concord's service area is within the Rocky River basin, so any water purchased by them becomes an IBT. Water service is only provided as an emergency back-up to Concord's routine supply which is Lake Howell and several smaller reservoirs. All of these reservoirs are within the Rocky River basin. Wastewater from Concord is treated at the RRRWWTP. Utilities' agreement with Concord is that water will be supplied to them subject to availability and subject to regulatory constraints including IBT and Federal Energy Regulatory Commission (FERC) limitations.

Concord received an IBT Certificate in January 2007, for the transfer of up to 10 mgd from the Catawba River basin to the Rocky River basin. NC DWR advised Utilities that water sold to Concord should not be applied to Utilities' IBT amount. Concord did not purchase any potable water from Utilities in calendar year 2009, so the IBT amounts reported do not include sales to Concord.

Utilities can transfer treated potable water to the Town of Harrisburg through two metered connections to their water system. All of Harrisburg's service area is within the Rocky River basin and is included in the Utilities' IBT amounts.

Table 1 below summarizes actual IBT amounts for calendar years 2002 through 2009 (all calculated using the methodology approved by NC DWR in June of 2006). The table considers the daily amounts of water transferred from the Catawba basin to customers within the Rocky River basin that is not returned to the Catawba basin.

The data indicates that the maximum amount of IBT for year 2009 occurred in August, and was 16.00 mgd, less than 49% of the authorized maximum day value of 33 mgd. The average IBT for 2009 was 12.04 mgd, which is approximately 36% of the authorized maximum day value. In addition to the amount of actual IBT reported in Table 1, Utilities has committed to provide additional IBT to development that has been proposed but not yet activated in the Rocky River basin. As of December 31, 2009, 1.41 mgd was committed to permitted donated projects (subdivisions) that had not been activated and 0.22 mgd was committed to master meter connections (generally commercial or multi-family developments) that had not been activated, both based on maximum day estimates. This brings the total of the actual and outstanding IBT in 2009 to 17.63 mgd, or less than 54% of the authorized maximum day value.

**Table 1. Actual IBT Summary**

<b>Calendar Year</b>	<b>Avg. Annual IBT (mgd)</b>	<b>Max. Day IBT (mgd)</b>
2002	6.74	11.97
2003	6.91	9.82
2004	7.79	12.56
2005	8.66	13.79
2006	9.56	14.35
2007	9.96	17.22
2008	11.39	17.42
2009	12.04	16.00

**Compliance with Certificate Conditions**

Condition 1 of Utilities’ IBT certificate requires Mecklenburg County to summarize progress in implementation of watershed management approaches of the Surface Water Improvement and Management Program (S.W.I.M. program). This summary follows:

*The watershed management approaches of the Surface Water Improvement and Management (SWIM) Program continued to be implemented during calendar year 2009. Efforts continued to focus on McDowell and Goose Creeks as in 2007 and 2008 but were expanded to include the South Prong and West Branch of the Rocky River in Davidson during 2009. During calendar year 2009, the following work was completed in the three (3) watersheds:*

- a) *Construction was completed for the installation of three (3) large rain gardens at the North Mecklenburg Recycling Center located in the Torrence Creek Watershed, which is a tributary of McDowell Creek in Huntersville. These rain gardens collect and treat 100% of the storm water runoff from the facility resulting in a reduction in the pollutant load entering Torrence Creek. The total cost for the project was \$307,000.*



- b) *Planning and design was completed for a stream restoration project including 7,700 feet in the main stem of Torrence Creek starting at McCoy Road and 9,000 linear feet*



*of Torrence Creek Tributary #2 from I-77 to Bradford Hill Lane. Construction is to be completed by December 2010. The total cost for the project is estimated at \$2,000,000.*

- c) Planning and design is underway for the restoration of Upper McDowell Creek in Cornelius, NC. The project will restore some of the most severely damaged sections of McDowell Creek and install BMPs to treat urban runoff before it enters the creek. The project is being funded by Cornelius, Mecklenburg County and the North Carolina 319 Grant Program. The total cost for the project is not available.*
- d) Mecklenburg County continues to partner with Creek ReLeaf, the Sierra Club and local schools to plant trees along the banks of McDowell Creek to restore the water quality buffer and floodplain. During 2009, over 2,500 trees were planted by approximately 400 volunteers along the floodplain in McDowell Creek.*
- e) The Goose Creek Watershed Management Plan was finalized and implementation initiated. One of the primary implementation measures was the inspection of all of the septic systems in the watershed to ensure that they are functioning properly and that all problems are corrected to prevent the discharge of sewage. Plans are to inspect all the septic systems in the watershed by June, 2011.*
- f) Efforts began toward the drafting of the Rocky River Watershed Management Plan. Field work commenced during the second half of 2009.*

Condition 2 of Utilities' IBT certificate required a stakeholder process to investigate, develop, adopt, and implement storm water ordinances that control water quantity from single-family development and water quality for all development until completed. The requirements of Condition 2 were completed in 2007.

Condition 3 of the IBT Certificate removes the Goose Creek subbasin from the area to be served by the IBT, and imposes a moratorium on the installation of new IBT water lines (water lines crossing the ridgeline) into Goose Creek subbasin until the impacts of additional growth on the endangered species are fully evaluated.

*The Utilities has requested the NC Division of Water Resources (DWR) to prepare an Environmental Assessment (EA) of new development in the Goose Creek basin (Mint Hill area), impacts to water quality, and measures required to protect the Carolina Heelsplitter.*



Condition 4 of the IBT Certificate provides that the Environmental Management Commission may reopen the Certificate under certain circumstances. This did not occur in 2009.

Condition 5 of the IBT Certificate requires Utilities to develop a compliance and monitoring plan for reporting maximum daily transfer amounts, compliance with certificate conditions, and progress on mitigation measures, and drought management activities. Utilities' monitoring plan and reporting format were approved in June of 2006 by NC DWR and continue to be used for 2009.

*2009 showed slow, but steady improvement from the drought conditions that gripped our state. The Catawba-Wateree Basin was slow to recover normal stream flows and the ground water lagged well behind surface water recharge. Charlotte Mecklenburg Utilities along with the other utilities in the Catawba-Wateree Basin remained in level 2 water restrictions until May 2009, in accordance with the Low Inflow Protocol adopted by the region's drought management group.*

*Customer consumption did not return to pre drought levels after the easing of restrictions in 2008 and did not rebound upward after the lifting of all restrictions in 2009. In fact, water use continued to decline in the Charlotte region. Even without restrictions, per account usage hit an all time low in 2009 for Charlotte Mecklenburg Utilities customers.*

*Water use in the Catawba – Wateree River Basin continued to track below historic average levels and closed out the year approximately 12 - 15% below normal.*

### **Summary**

The actual maximum day amount of water transferred from the Catawba River basin to the Rocky River basin was 16.00 mgd, less than 49% of the authorized maximum day value of 33 mgd. The total of actual and outstanding IBT was 17.63 mgd, less than 54% of the authorized maximum day value. Utilities is in full compliance with IBT authorizations and compliance conditions for calendar year 2009.